

REMARKS/ARGUMENTS

A portion of the specification has been amended so as to recite subject matter described in the original claims and to clarify portions of the text. Claims 8-14 have been canceled without prejudice and new claims 15-34 have been submitted for consideration. Thus, after this amendment, claims 15-34 are pending for further examination. No new matter has been added and reconsideration is respectfully requested.

Before addressing the rejections made in the Office Action mailed October 7, 2003, it is noted that an IDS is also filed herewith to submit US Patent Application Nos. 09/142,452 and 09/914,458 for consideration. It is noted that the former application serves as an English translation of WO 97/32963, and that the latter application serves as an English translation of WO 2000/050555. It is further noted that WO 2000/050555 claims priority to DE 199 08 434 A1.

Thus, in the following discussion, reference will be made to US Patent Application No. 09/914,458, in addition to or instead of DE 199 08 434 A1 or WO 2000/050555, when appropriate.

In the Office Action mailed October 7, 2002, claims 8-14 were rejected under 35 U.S.C. 112, first paragraph. Because claims 8-14 have been canceled, this rejection is moot, although it is noted that these rejections were taken into consideration when preparing new claims 15-34, which are believed to be fully enabled.

Claim 15 covers the use of a cleaning liquid, which comprises two components, to clean objects and then to remove contaminants (separated from the object) from the

cleaning liquid. The cleaning liquid contacts the object to be cleaned while in the state of a two-phase solution (or "solubility gap") and the removal of contaminants from the cleaning liquid is performed while the cleaning liquid is in the state of a homogeneous, one-phase solution (or a "homogeneous mixture").

Thus, by its nature, claim 8 concerns cleaning liquids having two components that exist in a first state (solubility gap) under a first set of conditions and in a second state (homogeneous mixture) under a second set of conditions. As a result, in order to satisfy these method limitations, the two components are limited to components that, when mixed together, are capable of achieving the first and second states. In other words, the cleaning liquid is limited to organic components that can be suitably mixed with water to achieve these two different states under different conditions.

The Examiner has taken the position that one skilled in the art could have not reproduced the invention of previously pending claim 8 without undue experimentation in order to figure out which components, objects and conditions would work and which would not. Applicant disagrees with this position, because the present specification provides ample teachings to assist the skilled person to identify appropriate components, objects and conditions, when read in the context of the known art in this field.

In particular, it is noted, for example, that a wide variety of emulsions containing water and organic components are well-known in the art and a skilled person can easily identify mixtures that will satisfy the limitations of the new claims by consulting, for example, textbooks and other general chemical references. Moreover, no undue

experimentation would be necessary to determine whether a particular mixture satisfies the claimed limitations, as any necessary experimentation would be quite routine. For example, the skilled person need only mix the two components and then adjust one or more conditions, such as pressure, temperature or state of agitation, and then visually observe the state of the cleaning liquid under the various changed conditions.

Furthermore, the present specification provides ample generalized teachings, as well as several specific working examples, that provides more than sufficient guidance to the skilled person to practice the full scope of the claimed invention. In addition, the present specification informs the skilled person that DE 199 08 434 A1 provides additional teachings concerning two-phase cleaning solutions and this text corresponds to U.S. Patent Application No. 09/914,458, which are part of the prior art that a skilled person could rely upon to determine how to practice the present teachings.

Thus, while a comprehensive analysis to determine all mixtures of water and organic components that satisfy the claimed limitations could be time consuming, if actual experimentation is performed, "the test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed. . . . Time and difficulty of experiments are not determinative if they are merely routine." MPEP 2164.06

Finally, it is noted that claim 8 was also rejected as not being enabled because it covered cleaning of "any type of object." In this regard, it is respectfully believed that the type of object does not require restriction in the present teachings, because the

subject of the teachings is a cleaning/purification method. Even if a skilled person could not adequately predict whether a certain object can be cleaned according to the method of claim 8, the experimentation necessary to establish whether the object can be cleaned would be routine, inexpensive and quick. Therefore, no undue experimentation would be necessary to determine which objects can be effectively cleaned according to the methods of new claims 15-34. MPEP 2164.06

Consequently, Applicant respectfully believes that new claims 15-34 are enabled for the full scope of coverage.

Claims 8-14 were also rejected under 35 U.S.C. 112, second paragraph as being indefinite. Again, this rejection is moot, because claims 8-14 have been canceled and the Applicant has taken the Examiner's comments into consideration when preparing new claims 15-34. Additional comments concerning this rejection are provided as follows.

With respect to claim 15, the cleaning liquid must be capable of assuming two different states, i.e., the state of a two-phase solution (solubility gap) and the state of a one-phase solution (homogeneous mixture). A skilled person clearly understands that a solution can not assume both states under the same exact conditions. Further, a skilled person understands that various different conditions (e.g., pressure, temperature, agitation, etc.) may influence the state of the solution.

Therefore, the first and second set of conditions recited in claim 15 are merely intended to reflect the underlying understanding that the two-phase solution will exist under one type of conditions and the one-phase solution will exist under another,

different type of conditions. Due to the knowledge of the skilled person in this field and the breadth of the present invention, further definition of the conditions is not believed to be necessary.

As to the question that was raised whether the objects are cleaned using the second set of conditions, it is noted that, according to Section 112, second paragraph, the applicant has the right to claim "the subject matter which the applicant regards as his invention." The last limitation of claim 15 only recites the removal of contaminants, but the method is not limited to only such operations due to the use of the term "comprising" after the preamble of claim 15. Therefore, while the preferred embodiments refer to cleaning the object under the first set of conditions, cleaning is not limited to only the first designated conditions.

With respect to new claim 17, the phrase "organic-rich droplets in a continuous aqueous phase" simply means that the cleaning liquid is in the state of being an "organic-in-water" emulsion, in which the aqueous phase is in excess, such that the organic phase exists as discrete droplets within an excess of aqueous solution.

For these reasons, claims 15-34 are believed to satisfy Section 112, second paragraph.

Claims 8-14 were also rejected under 35 U.S.C 102(b) as being anticipated by DE 199 08 434 A1, which corresponds to U.S. Patent Application No. 09/914,458, as was noted above. Again, because claims 8-14 have been canceled, this rejection is moot, although the following comments will be provided to assist the further examination of new claims 15-34.

As can be determined by reviewing the enclosed copy of US Patent Application No. 09/914,458, this reference (and thus, DE 199 08 434 A1) does not teach, for example, the steps of:

“changing the state of the cleaning liquid from the two-phase solution into the homogeneous, one-phase solution by application of the second set of conditions, and removing contaminants from cleaning liquid while the cleaning liquid is in the state of the homogeneous, one-phase solution.”

Neither DE 199 08 434 A1 nor US Patent Application No. 09/914,458 provides any discussion concerning removing contaminants from the cleaning liquid. Therefore, the novelty rejection should be withdrawn, because all limitations of new claim 15-34 are not taught by DE 199 08 434 A1.

With respect to the Section 103 rejection made in paragraph 7 of the Office Action, it is again noted that DE 199 08 434 is the priority document for WO 2000/050555. The latter publication includes all the teachings of the former publication.

As was discussed above, US Patent Application No. 09/914,458, which is a literal translation of WO 2000/050555, does not provide any teachings concerning removing contaminants from the cleaning liquid. Moreover, EP 0 598 917 teaches glycol ether solutions that were utilized to clean objects while in a homogeneous, one-phase solution. Thus, EP 0 598 917 does not teach cleaning objects using a two-phase cleaning liquid. Moreover, EP 0 598 917 does not teach changing the state of the cleaning liquid from a two-phase solution to a homogeneous mixture before removing contaminants from the cleaning liquid in the homogeneous state. Thus, a combination

EP 0 598 917 and WO 2000/050555 (US Patent Application No. 09/914,458) does not teach all elements of claim 15.

Consequently, new claims 15-34 are believed to be novel and non-obvious over the cited prior art.

Finally, Applicant also traverses the provisional rejection of claims 8-14 for obviousness-type double patenting in view of pending claims 70, 83 and 97 of co-pending US Patent Application No. 09/142,452, a copy of which has been submitted with the IDS filed herewith. Simply stated, claims 70, 83 and 97 of co-pending US Patent Application No. 09/142,452 do not recite any steps concerning:

“changing the state of the cleaning liquid from the two-phase solution into the homogeneous, one-phase solution by application of the second set of conditions, and removing contaminants from cleaning liquid while the cleaning liquid is in the state of the homogeneous, one-phase solution.”

It is respectfully submitted that these steps recited in claim 15 are patentably distinct from 70, 83 and 97 of US Patent Application No. 09/142,452 and furthermore, no evidence was provided as to why these steps are obvious over claims 70, 83 and 97 of US Patent Application No. 09/142,452. The obviousness-type double patenting rejection should be withdrawn for at least this reason.

For all the foregoing reasons, the application is believed to be in a condition for allowance and an early Notice of Allowance is respectfully solicited.

However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call from her in order to resolve any

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outstanding issues and expedite placement of the application into condition for allowance.

Respectfully Submitted,

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